

Serial No. 09/965,570
Atty. Doc. No. 01P17904US

REMARKS

Claims 1-15 are pending in the application. In light of the following remarks, Applicant respectfully requests favorable reconsideration and allowance of the pending claims.

Rejection of Claims 2, 5, 9, and 12 Under § 112

Claims 2, 5, 9, and 12 have been rejected under 35 U.S.C. § 112, ¶2, on the basis that the language "a hollow cavity positioned substantially within the outer peripheries of the wedge body" is improper because the hollow cavity cannot lie on or outside the outer periphery of the wedge body. Applicants have corrected this informality by amending claims 2, 5, 9, and 12 to recite that the at least one hollow cavity "extends through the wedge body and is positioned within the wedge body." Accordingly, Applicants respectfully request that the rejection of claims 2, 5, 9, and 12 be withdrawn.

Rejection of Claims 1-7 Under § 103

Claims 1-7 have been rejected under 35 U.S.C. § 103(a) based on Applicants' Prior Art in view of U.S. Patent No. 1,227,414 ("Field") and U.S. Patent No. 4,827,597 ("Hein"). For the following reasons, Applicants respectfully traverse the rejection.

Neither Field, Hein, nor Applicants' Prior Art nor their combination teaches or suggests "rotor wedges . . . having a wedge body and at least one substantially hollow cavity means formed in the wedge body so that the at least one hollow cavity means is substantially evenly distributed about a neutral axis of stress," as recited by claim 1. Field and Hein refer to a **stator** slot wedge. Applicants Prior Art refers to a **rotor** slot wedge. One skilled in the art would not have combined Field and/or Hein with Applicants Prior Art because rotor slot wedges and stator slot wedges must be designed and constructed for very different application requirements. Rotors spin; stators do not. Therefore, unlike stator slot wedges, rotor slots wedges must

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withstand large centrifugal forces. Before Applicants' invention, rotor slot wedges were constructed using solid bodies like the one illustrated in Applicants' Figure 1 in order to ensure that they would withstand large centrifugal forces. Applicants have determined that, because rotor slot wedges are loaded as a beam (see Applicants' Figure 1), a center zone exists within a wedge that does not contribute significantly to the wedge's strength in the beam mode. Applicants have determined that the center zone of material may be removed from the wedge without significantly sacrificing wedge strength. Most importantly, by removing the center zone of material, Applicants are able to reduce the overall mass burden caused by the wedge and to increase the efficiency of a power generator. Based on at least these novel and unobvious features of Applicants' claimed invention, Applicants respectfully request favorable reconsideration of the rejection of claim 1 and claims 2-7, which depend from claim 1.

As suggested by the Examiner, Applicants have also amended claims 1, 2, 3, and 5 to comply with 35 U.S.C. § 112, ¶6. Accordingly, Applicants respectfully request that the Examiner give the affected claim limitations their appropriate patentable weight.

Rejection of Claims 8-15 Under § 102 and/or § 103

In the Examiner's Detailed Action, the heading for the rejection of claims 8-15 refers to § 102. However, the contents of the rejection refer to § 103(a). Applicants have addressed both bases of rejection below.

Claims 8-12 have been rejected under 35 U.S.C. § 102 and/or § 103(a) based on U.S. Patent No. 1,227,414 ("Field") and case law. As discussed above with regard to claims 1-7, neither Field, Hein, nor Applicants' Prior Art nor their combination teaches or suggests "a rotor wedge . . . comprising a wedge body and at least one substantially hollow cavity means formed in the wedge body so that the at least one hollow cavity means is substantially evenly distributed

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about a neutral axis of stress," as recited by claim 8. Field and Hein disclose stator slot wedges. Applicants Prior Art discloses a rotor slot wedge. One skilled in the art would not have combined Field and/or Hein with Applicants' Prior Art because rotor slot wedges and stator slot wedges must be designed and constructed to withstand very different application requirements. Based on at least these novel and unobvious features, Applicants respectfully request favorable reconsideration of the rejection of claim 8 and claims 9-15, which depend from claim 8.

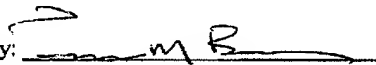
Applicants also note that, in response to the Examiner's suggestion, Applicants have amended claims 8, 9, 10, and 12 to comply with 35 U.S.C. § 112, ¶6. Applicants respectfully request that the Examiner give the affected claim limitations their appropriate patentable weight.

CONCLUSION

In light of the above remarks, Applicants respectfully request favorable reconsideration and allowance of claims 1-15. Should the Examiner have any questions concerning this paper or application, the Examiner is respectfully requested to contact Applicants' undersigned attorney to resolve such issue or question. The commissioner is hereby authorized to charge any appropriate fees due in connection with this paper or credit any overpayments to Deposit Account No. 19-2179.

Respectfully submitted,

Dated: 3/18/03

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

1. (Amended) A power generator comprising:

a stator;

a rotor positioned adjacent the stator, the rotor having a plurality of slots formed therein;

a plurality of a rotor coils each positioned within a respective one of the plurality of slots;

and

a plurality of rotor wedges each positioned to retain a respective one of the plurality of rotor coils within the one respective one of the plurality of slots, each of the plurality of rotor wedges having a wedge body and at least one substantially hollow cavity means formed in the wedge body so that the at least one hollow cavity means is substantially evenly distributed about a neutral axis of stress applied to the wedge body when in use and so that the neutral axis of stress of the wedge body having the hollow cavity means is substantially the same neutral axis of stress of a wedge body having substantially the same shape as the wedge body without the hollow cavity means.

2. (Amended) A power generator as defined in Claim 1, wherein the at least one hollow cavity means extends [in a substantially longitudinal direction] through [major portions of] the wedge body and is positioned [substantially] within [the outer peripheries of] the wedge body.

3. (Amended) A power generator as defined in Claim 1, wherein the at least one hollow cavity means comprises a plurality of longitudinally extending and substantially hollow cavities substantially evenly distributed about the neutral axis of stress of the wedge body so that the

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neutral axis of stress of the wedge body having the plurality of hollow cavities is substantially the same neutral axis of stress of a wedge body having substantially the same shape as the wedge body without the plurality of hollow cavities.

5. (Amended) A power generator as defined in Claim 4, wherein the at least one hollow cavity means extends [in a substantially longitudinal direction] through [major portions of] the wedge body and is positioned [substantially] within [the outer peripheries of] the wedge body.

8. (Amended) A rotor wedge for a power generator, the rotor wedge comprising a wedge body and at least one substantially hollow cavity means formed in the wedge body so that the at least one hollow cavity means is substantially evenly distributed about a neutral axis of stress applied to the wedge body when in use and so that the neutral axis of stress of the wedge body having the hollow cavity means is substantially the same neutral axis of stress of a wedge body having substantially the same shape as the wedge body without the hollow cavity means.

9. (Amended) A rotor wedge as defined in Claim 8, wherein the at least one hollow cavity means extends [in a substantially longitudinal direction] through [major portions of] the wedge body and is positioned [substantially] within [the outer peripheries of] the wedge body.

10. (Amended) A rotor wedge as defined in Claim 8, wherein the at least one hollow cavity means comprises a plurality of substantially hollow [cavities] cavity means substantially evenly distributed about the neutral axis of stress of the wedge body so that the neutral axis of stress of the wedge body having the plurality of hollow [cavities] cavity means is substantially

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the same neutral axis of stress of a wedge body having substantially the same shape as the wedge body without the plurality of hollow [cavities] cavity means.

12. (Amended) A rotor wedge as defined in Claim 11, wherein the at least one hollow cavity means extends [in a substantially longitudinal direction] through [major portions of] the wedge body and is positioned [substantially] within [the outer peripheries of] the wedge body.

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